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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,715	04/06/2001	Christine W. Jarvis	CXU-350	5602
22827	7590	06/15/2006	EXAMINER	
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			RHEE, JANE J	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/828,715	JARVIS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jane Rhee	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 100-125 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 100-125 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/1/2006 has been entered.

***Rejections Withdrawn***

2. The 35 U.S.C. 102 (b) rejection of claims 41-42,44,46-47,50-51,53,57 anticipated by Gaylord Jr. et al. has been withdrawn due to applicant's amendment filed on 5/4/2006.

3. The 35 U.S.C. 102(b) rejection of claims 63-64,70-71 anticipated by Gaylord Jr. et al. has been withdrawn due to applicant's amendment filed on 5/4/2006.

4. The 35 U.S.C. 103(a) rejection of claims 43,48-49,56,58-61,77,79-87,83,86,88-93,96,98-99 over Gaylord Jr et al. in view of Obayashi et al., Efunda, Encyclopedia of Petroleum, and Lumicor has been repeated for the reasons previously made in office action 2/8/2005.

5. The 35 U.S.C. 103(a) rejection of claims 67-69,72-74,91-93,96,98-99 over Gaylord Jr et al. in view of Obayashi et al., Efunda, Encyclopedia of Petroleum, and Lumicor has been repeated for the reasons previously made in office action 2/8/2005.

6. The 35 U.S.C. 103(a) rejection of claims 45,55,62,78,85 over Gaylord Jr. et al. in view of Benstock et al. has been repeated for reasons previously made in office action 2/8/2005.

7. The 35 U.S.C. 103(a) rejection of claims 65,95 over Gaylord Jr. et al. in view of Benstock et al. has been repeated for the reasons previously made in office action 2/8/2005.

8. The 35 U.S.C. 103(a) rejection of claims 52,82 over Gaylord Jr et al. in view of Arakawa et al. has been repeated for the reasons previously made in office action 2/8/2005.

9. The 35 U.S.C. 103(a) rejection of claims 54,84 over Gaylord et al. in view of Gaylord Jr. in view of Wilhoit et al. has been repeated for the reasons previously made in office action 2/8/2005.

10. The 35 U.S.C. 103(a) rejection of claim 66,94 over Gaylord et al. in view of Wilhoit et al. has been repeated for the reasons previously made in office action 2/8/2005.

11. The 35 U.S.C. 103(a) rejection of claim 87 over Gaylord Jr et al. in view of Obayashi et al., Efunda, Encyclopedia of Petroleum, and Lumicor has been repeated for the reasons previously made in office action 2/8/2005.

12. The 35 U.S.C. 103(a) rejection of claim 97 over Gaylord Jr et al. in view of Obayashi et al., Efunda, Encyclopedia of Petroleum, and Lumicor has been repeated for the reasons previously made in office action 2/8/2005.

***New Rejections***

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

14. Claims 115, 116, 122 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new matter issue is "bonding width". More specifically, the specification does not describe a bonding width greater than twice the seam width or at least three times the seam width.
15. Claim 124 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new matter issue is the third substrate portion. The drawings nor the specification describe a "third substrate portion".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

16. Claims 108,117 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The indefinite limitation is "wherein the seam has a strength greater than a sewn seam made with the same substrates." Because the it is unknown what the sewn seam strength is, it is indefinite to compare it to a welded seam strength.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 100-101,103-121, 123,125 are rejected under 35 U.S.C. 102(b) as being anticipated by Gaylord Jr. (3970079).

As to claim 100, Gaylord Jr. discloses a five layer stitchless seam comprising a first tape portion, a first substrate portion in contact with the first tape portion, a second tape portion in contact with the first substrate portion, a second substrate portion in contact with the second tape portion, and a third tape portion in contact with the second substrate portion to provide a flexible stitchless seam between the five layers (see figure 13). As to claim 101, Gaylord Jr. discloses at least two of the tape portions are contiguous (figure 13 number 68). As to claim 103, Gaylord Jr. discloses at least two of the tape portions and the substrate portions are the same materials (figure 13 number

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68 and col. 2 line 56). As to claim 104, Gaylord Jr. discloses the first substrate portion and the second substrate portion are different materials (figure 13 number 55 and 52).

As to claim 105, Gaylord Jr. discloses at least one of the substrate portions comprises a barrier layer (the substrates are made of cotton fibers, rayon and rubber which can be considered as a barrier layer). As to claim 106, Gaylord Jr. discloses at least one of the substrate portions comprises a fabric (col. 3 line 23). As to claim 107, Gaylord Jr. discloses at least that both the first substrate portion and the second substrate portion comprises a fabric (col. 3 line 23). As to claim 108, wherein at least four areas of the first and second substrate portions are bonded in a cross sectional area of the seam (figure 13 top and bottom portion of substrate 55 and top and bottom portion of substrate 52). As to claim 113, Gaylord Jr. discloses that the seam is a welded seam (col. 4 lines 20-24).

As to claim 114, Gaylord Jr. discloses a multilayer stitchless seam comprising a connecting bond formed between at least a first substrate and a second substrate and at least a first tape portion, a second tape portion, and a third tape portion, wherein the stitchless seam is a welded seam having a seam width, wherein the first substrate surface is contacted by the first tape portion across a bonding width that is greater than the seam width (figure 13).

As to claim 115, Gaylord Jr. discloses that the bonding width is greater than twice the seam width (figure 13, the length of the tape that is bonded to the substrate is at least twice the seam width).

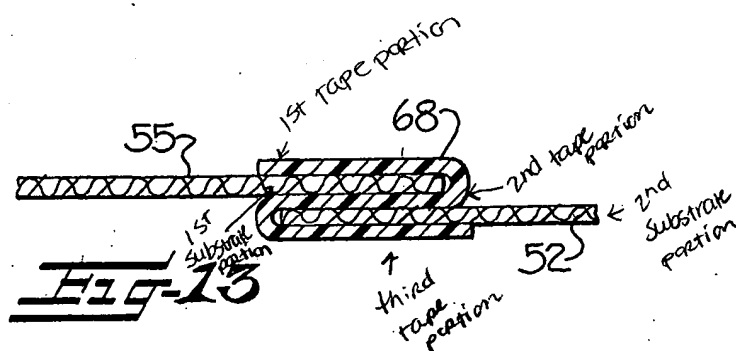
As to claim 116, Gaylord Jr. discloses that the bonding width is at least three times the seam width (figure 13, the length of the tape that is bonded to the substrate is at least three times the seam width considering that it hits four parts of the substrate).

As to claim 117, Gaylord Jr. discloses that at least four areas of the first and second substrate are bonded in a cross sectional area of the seam (figure 13 top and bottom portion of substrate 55 and top and bottom portion of substrate 52).

As to claim 123, Gaylord Jr. discloses that a multilayer stitchless seam comprising a first tape portion, a first substrate portion in contact with the first tape portion, a second tape portion in contact with the first substrate portion, a second substrate portion in contact with the second tape portion, and a third tape portion in contact with the second substrate portion to provide a flexible seam between the layers (see figure 13)

As to claim 125, Gaylord Jr. further discloses wherein the seam is a welded seam (col. 4 lines 20-24).

As to claims 109-112 and 118-121, Gaylord Jr. discloses that at least four areas of the first and second substrates are bonded in a cross sectional areas of the seam. Since, Gaylord Jr. teaches that the first and second substrate is made of fabric and the tape is made of a thermoplastic material as desired by the applicant, it is inherent that the tensile grab strength is at least 150kg.





***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 102,122, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaylord Jr. in view of Obayashi et al. (4410575).

Gaylord Jr. discloses the multilayer stitchless seam described above. As to claim 102, Gaylord Jr. fail to disclose at least one of the tape portions is multilayered.

Obayashi et al. teaches that the tape may have a layer of adhesive for the purpose of fixing the locations of the end portions of the fabric or fabrics and the bonding tape in a desired relationship to each other (col. 5 lines 40-43).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Gaylord Jr. with at least one of the tape portions is multilayered such as providing one adhesive layer in order to fix the locations of the end portions of the fabric or fabrics and the bonding tape in a desired relationship to each other (col. 5 lines 40-43) as taught by Obayashi et al.

As to claim 122, Gaylord Jr. fail to disclose the bonding width of at least 1.6mm. Obayashi et al. teaches a bonding width of 1-3mm for the purpose of protecting the weld from peeling (col. 5 lines 29-33).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide, Gaylord Jr. with a bonding width of 1-3mm in order to protect the weld from peeling (col. 5 lines 29-33) as taught by Gaylord Jr.

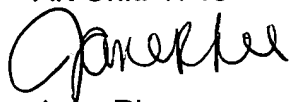
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jane Rhee whose telephone number is 571-272-1499. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in cursive script, appearing to read 'Jane Rhee'.

Jane Rhee  
June 8, 2006

A handwritten signature in cursive script, appearing to read 'Patrick Joseph Ryan'.

**PATRICK JOSEPH RYAN  
SUPERVISORY PATENT EXAMINER**